

## PROFESSIONAL SERVICES AGREEMENT

Arrowhead Hospital (COG-50) and Sierra Verde Park (COG-51) Wells  
City of Glendale Project # 212228

This Professional Services Agreement ("Agreement") is entered into and effective between CITY OF GLENDALE, an Arizona municipal corporation ("City") and Hazen and Sawyer, a Corporation, ("Consultant") as of the \_\_\_\_ day of \_\_\_\_\_, 2022 ("Effective Date").

### RECITALS

- A. City intends to undertake a project for the benefit of the public and with public funds that is more fully set forth in **Exhibit A**, Project (the "Project");
- B. City desires to retain the professional services of Consultant to perform certain specific duties and produce the specific work as set forth in the attached **Exhibit B**, Project Scope of Work ("Scope");
- C. Consultant desires to provide City with professional services ("Services") consistent with best consulting or architectural practices and the standards set forth in this Agreement, in order to complete the Project; and
- D. City and Consultant desire to memorialize their agreement with this document.

### AGREEMENT

The parties hereby agree as follows:

#### 1. **Key Personnel; Other Consultants and Subcontractors.**

- 1.1 Professional Services. Consultant will provide all Services necessary to assure the Project is completed timely and efficiently consistent within Project requirements, including, but not limited to, working in close interaction and interfacing with City and its designated employees, and working closely with others, including other consultants or contractors, retained by City.
- 1.2 Project Team.
  - a. Project Manager.
    - (1) Consultant will designate an employee as Project Manager with sufficient training, knowledge, and experience to, in the City's opinion, complete the project and handle all aspects of the Project such that the work produced by Consultant is consistent with applicable standards as detailed in this Agreement; and
    - (2) The City must approve the designated Project Manager.
  - b. Project Team.
    - (1) The Project Manager and all other employees assigned to the Project by Consultant will comprise the "Project Team."
    - (2) Project Manager will have responsibility for and will supervise all other employees assigned to the Project by Consultant.
  - c. Discharge, Reassign, Replacement.
    - (1) Consultant acknowledges the Project Team is comprised of the same persons and roles for each as may have been identified in **Exhibit A**.
    - (2) Consultant will not discharge, reassign, replace or diminish the responsibilities of any of the employees assigned to the Project who have been approved by City without City's prior written consent unless that person leaves the employment of Consultant, in which event the substitute must first be approved in writing by City.

(3) Consultant will change any of the members of the Project Team at the City's request if an employee's performance does not equal or exceed the level of competence that the City may reasonably expect of a person performing those duties, or if the acts or omissions of that person are detrimental to the development of the Project.

d. Subcontractors.

- (1) Consultant may engage specific technical contractors (each a "Subcontractor") to furnish certain service functions.
- (2) Consultant will remain fully responsible for Subcontractor's services.
- (3) Subcontractors must be approved by the City.
- (4) Consultant will certify by letter that all contracts with Subcontractors have been executed incorporating requirements and standards as set forth in this Agreement.

2. **Schedule.** The Services will be undertaken in a manner that ensures the Project is completed timely and efficiently in accordance with the Project.

3. **Consultant's Work.**

3.1 Standard. Consultant must perform Services in accordance with the standards of due diligence, care, and quality prevailing among consultants having substantial experience with the successful furnishing of Services for projects that are equivalent in size, scope, quality, and other criteria under the Project and identified in this Agreement.

3.2 Licensing. Consultant warrants that:

- a. Consultant and its Subconsultants or Subcontractors will hold all appropriate and required licenses, registrations and other approvals necessary for the lawful furnishing of Services ("Approvals"); and
- b. Neither Consultant nor any Subconsultant or Subcontractor has been debarred or otherwise legally excluded from contracting with any federal, state, or local governmental entity ("Debarment").
  - (1) City is under no obligation to ascertain or confirm the existence or issuance of any Approvals or Debarments, or to examine Consultant's contracting ability.
  - (2) Consultant must notify City immediately if any Approvals or Debarment changes during the Agreement's duration. The failure of the Consultant to notify City as required will constitute a material default under the Agreement.

3.3 Compliance.

- a. Services will be furnished in compliance with applicable federal, state, county and local statutes, rules, regulations, ordinances, building codes, life safety codes, and other standards and criteria designated by City.
- b. Consultant must not discriminate against any employee or applicant for employment on the basis of race, color, religion, sex, national origin, age, marital status, sexual orientation, gender identity or expression, genetic characteristics, familial status, U.S. military veteran status or any disability. Consultant will require any Sub-contractor to be bound to the same requirements as stated within this section. Consultant, and on behalf of any subcontractors, warrants compliance with this section.

3.4 Coordination; Interaction.

- a. For projects that the City believes requires the coordination of various professional services, Consultant will work in close consultation with City to proactively interact with

any other professionals retained by City on the Project ("Coordinating Project Professionals").

- b. Consultant will meet to review the Project, Schedule and in-progress work with Coordinating Project Professionals and City as often and for durations as City reasonably considers necessary in order to ensure the timely work delivery and Project completion.
- c. For projects not involving Coordinating Project Professionals, Consultant will proactively interact with any other contractors when directed by City to obtain or disseminate timely information for the proper execution of the Project.

### 3.5 Work Product.

- a. Ownership. Upon receipt of payment for Services furnished, Consultant grants to City, and will cause its Subconsultants or Subcontractors to grant to the City, the exclusive ownership of and all copyrights, if any, to evaluations, reports, drawings, specifications, project manuals, surveys, estimates, reviews, minutes, all "architectural work" as defined in the United States Copyright Act, 17 U.S.C § 101, *et seq.*, and other intellectual work product as may be applicable ("Work Product").
  - (1) This grant is effective whether the Work Product is on paper (e.g., a "hard copy"), in electronic format, or in some other form.
  - (2) Consultant warrants, and agrees to indemnify, hold harmless and defend City for, from and against any claim that any Work Product infringes on third-party proprietary interests.
- b. Delivery. Consultant will deliver to City copies of the preliminary and completed Work Product promptly as they are prepared.
- c. City Use.
  - (1) City may reuse the Work Product at its sole discretion.
  - (2) In the event the Work Product is used for another project without further consultations with Consultant, the City agrees to indemnify and hold Consultant harmless from any claim arising out of the Work Product.
  - (3) In such case, City will also remove any seal and title block from the Work Product.

## 4. **Compensation for the Project.**

- 4.1 Compensation. Consultant's compensation for the Project, including those furnished by its Subconsultants or Subcontractors will not exceed \$1,888,433 as specifically detailed in **Exhibit D** ("Compensation").
- 4.2 Change in Scope of Project. The Compensation may be equitably adjusted if the originally contemplated Scope as outlined in the Project is significantly modified.
  - a. Adjustments to Compensation require a written amendment to this Agreement and may require City Council approval.
  - b. Additional services which are outside the Scope of the Project contained in this Agreement may not be performed by the Consultant without prior written authorization from the City.
  - c. Notwithstanding the incorporation of the Exhibits to this Agreement by reference, should any conflict arise between the provisions of this Agreement and the provisions found in the Exhibits and accompanying attachments, the provisions of this Agreement shall take priority and govern the conduct of the parties.
- 4.3 Allowances. An "Allowance" may be identified in **Exhibit D** only for work that is required by the Scope and the value of which cannot reasonably be quantified at the time of this Agreement.

- a. As stated in Sec. 4.1 above, the Compensation must incorporate all Allowance amounts identified in **Exhibit D** and any unused allowance at the completion of the Project will remain with City.
  - b. Consultant may not add any mark-up for work identified as an Allowance and which is to be performed by a Subconsultant.
  - c. Consultant will not use any portion of an Allowance without prior written authorization from the City.
  - d. Examples of Allowance items include, but are not limited to, subsurface pothole investigations, survey, geotechnical investigations, public participation, radio path studies and material testing.
- 4.4 Expenses. City will reimburse Consultant for certain out-of-pocket expenses necessarily incurred by Consultant in connection with this Agreement, without mark-up (the “Reimbursable Expenses”), including, but not limited to, document reproduction, materials for book preparation, postage, courier and overnight delivery costs incurred with Federal Express or similar carriers, travel and car mileage, subject to the following:
- a. Mileage, airfare, lodging and other travel expenses will be reimbursable only to the extent these would, if incurred, be reimbursed to City of Glendale personnel under its policies and procedures for business travel expense reimbursement made available to Consultant for review prior to the Agreement’s execution, and which policies and procedures will be furnished to Consultant;
  - b. The Reimbursable Expenses in this section are approved in advance by City in writing; and
  - c. The total of all Reimbursable Expenses paid to Consultant in connection with this Agreement will not exceed the “not to exceed” amount identified for Reimbursable Services in the Compensation.

**5. Billings and Payment.**

5.1 Applications.

- a. Consultant will submit monthly invoices (each, a "Payment Application") to City's Project Manager and City will remit payments based upon the Payment Application as stated below.
- b. The period covered by each Payment Application will be one calendar month ending on the last day of the month.

5.2 Payment.

- a. After a full and complete Payment Application is received, City will process and remit payment within 30 days.
- b. Payment may be subject to or conditioned upon City's receipt of:
  - (1) Completed work generated by Consultant and its Subconsultants and Subcontractors; and
  - (2) Unconditional waivers and releases on final payment from all Subconsultants and Subcontractors as City may reasonably request to assure the Project will be free of claims arising from required performances under this Agreement.

5.3 Review and Withholding. City's Project Manager will timely review and certify Payment Applications.

- a. If the Payment Application is rejected, the Project Manager will issue a written listing of the items not approved for payment.

- b. City may withhold an amount sufficient to pay expenses that City reasonably expects to incur in correcting the deficiency or deficiencies rejected for payment.

**6. Termination.**

6.1 For Convenience. City may terminate this Agreement for convenience, without cause, by delivering a written termination notice stating the effective termination date, which may not be less than 15 days following the date of delivery.

- a. Consultant will be equitably compensated for Services furnished prior to receipt of the termination notice and for reasonable costs incurred.
- b. Consultant will also be similarly compensated for any approved effort expended, and approved costs incurred, that are directly associated with Project closeout and delivery of the required items to the City.

6.2 For Cause. City may terminate this Agreement for cause if Consultant fails to cure any breach of this Agreement within seven days after receipt of written notice specifying the breach.

- a. Consultant will not be entitled to further payment until after City has determined its damages. If City's damages resulting from the breach, as determined by City, are less than the equitable amount due but not paid Consultant for Services furnished, City will pay the amount due to Consultant, less City's damages, in accordance with the provision of Sec. 5.
- b. If City's direct damages exceed amounts otherwise due to Consultant, Consultant must pay the difference to City immediately upon demand; however, Consultant will not be subject to consequential damages more than \$1,000,000 or the amount of this Agreement, whichever is greater.

7. **Conflict.** Consultant acknowledges this Agreement is subject to A.R.S. § 38-511, which allows for cancellation of this Agreement in the event any person who is significantly involved in initiating, negotiating, securing, drafting, or creating the Agreement on City's behalf is also an employee, agent, or consultant of any other party to this Agreement.

8. **Insurance.** For the duration of the term of this Agreement, Consultant shall procure and maintain insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of all tasks or work necessary to complete the Project as herein defined. Such insurance shall cover Consultant, its agent(s), representative(s), employee(s) and any subcontractors.

8.1 **Minimum Scope and Limit of Insurance.** Coverage must be at least as broad as:

- a. **Commercial General Liability (CGL):** Insurance Services Office Form CG 00 01, including products and completed operations, with limits of no less than **\$1,000,000** per occurrence for bodily injury, personal injury, and property damage. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit.
- b. **Automobile Liability:** Insurance Services Office Form Number CA 0001 covering Code 1 (any auto), with limits no less than **\$1,000,000** per accident for bodily injury and property damage.
- c. **Professional Liability.** Consultant must maintain a Professional Liability insurance covering errors and omissions arising out of the work or services performed by Consultant, or anyone employed by Consultant, or anyone for whose acts, mistakes, errors and omissions Consultant is legally liability, with a liability insurance limit of \$1,000,000 for each claim and a \$2,000,000 annual aggregate limit.
- d. **Worker's Compensation:** Insurance as required by the State of Arizona, with Statutory Limits, and Employers' Liability insurance with a limit of no less than **\$1,000,000** per accident for bodily injury or disease.

8.2 Indemnification.

- a. To the fullest extent permitted by law, Consultant must defend, indemnify, and hold harmless City and its elected officials, officers, employees and agents (each, an "Indemnified Party," collectively, the "Indemnified Parties") for, from, and against any and all claims, demands, actions, damages, judgments, settlements, personal injury (including sickness, disease, death, and bodily harm), property damage (including loss of use), infringement, governmental action and all other losses and expenses, including attorneys' fees and litigation expenses (each, a "Demand or Expense" collectively "Demands or Expenses") asserted by a third-party (i.e. a person or entity other than City or Consultant) and that arises out of or results from the breach of this Agreement by the Consultant or the Consultant's negligent actions, errors or omissions (including any Subconsultant or Subcontractor or other person or firm employed by Consultant), whether sustained before or after completion of the Project.
- b. This indemnity and hold harmless provision applies even if a Demand or Expense is in part due to the Indemnified Party's negligence or breach of a responsibility under this Agreement, but in that event, Consultant will be liable only to the extent the Demand or Expense results from the negligence or breach of a responsibility of Consultant or of any person or entity for whom Consultant is responsible.
- c. Consultant is not required to indemnify any Indemnified Parties for, from, or against any Demand or Expense resulting from the Indemnified Party's sole negligence or other fault solely attributable to the Indemnified Party.

8.3 **Other Insurance Provisions.** The insurance policies required by the Section above must contain, or be endorsed to contain the following insurance provisions:

- a. **The City, its officers, officials, employees and volunteers are to be covered as additional insureds** of the CGL and automobile policies for any liability arising from or in connection with the performance of all tasks or work necessary to complete the Project as herein defined. Such liability may arise, but is not limited to, liability for materials, parts or equipment furnished in connection with any tasks, or work performed by Consultant or on its behalf and for liability arising from automobiles owned, leased, hired or borrowed on behalf of the Consultant. General liability coverage can be provided in the form of an endorsement to the Consultant's existing insurance policies, provided such endorsement is at least as broad as ISO Form CG 20 10, 11 85 or both CG 20 10 and CG 23 37, if later revisions are used.
- b. For any claims related to this Project, the **Consultant's insurance coverage shall be primary insurance** with respect to the City, its officers, officials, employees, and volunteers. Any insurance or self-insurance maintained by the City, its officers, officials, employees or volunteers shall be in excess of the Consultant's insurance and shall not contribute with it.
- c. Each insurance policy required by this Section shall provide that coverage shall not be canceled, except after providing notice to the City.

8.4 **Acceptability of Insurers.** Insurance is to be placed with insurers with a current A.M. Best rating of no less than A: VII, unless the Consultant has obtained prior approval from the City stating that a non-conforming insurer is acceptable to the City.

8.5 **Waiver of Subrogation.** **Consultant hereby agrees to waive its rights of subrogation which any insurer may acquire** from Consultant by virtue of the payment of any loss. Consultant agrees to obtain any endorsement that may be necessary to effect this waiver of subrogation. The Workers' Compensation Policy shall be endorsed with a waiver of subrogation in favor of the City for all work performed by the Consultant, its employees, agent(s) and subcontractor(s).

8.6 **Verification of Coverage.** Within 15 days of the Effective Date of this Agreement, Consultant shall furnish the City with original certificates and amendatory endorsements, or copies of any applicable insurance language making the coverage required by this Agreement effective. All certificates and endorsements must be received and approved by the City before work commences. Failure to obtain, submit or secure the City's approval of the required insurance policies, certificates or endorsements prior to the City's agreement that work may commence shall not waive the Consultant's obligations to obtain and verify insurance coverage as otherwise provided in this Section. The City reserves the right to require complete, certified copies of all required insurance policies, including any endorsements or amendments, required by this Agreement at any time during the Term stated herein.

Consultant's failure to obtain, submit or secure the City's approval of the required insurance policies, certificates or endorsements shall not be considered a Force Majeure or defense for any failure by the Consultant to comply with the terms and conditions of the Agreement, including any schedule for performance or completion of the Project.

8.7 **Subcontractors.** Consultant shall require and shall verify that all subcontractors maintain insurance meeting all requirements of this Agreement.

8.8 **Special Risk or Circumstances.** The City reserves the right to modify these insurance requirements, including any limits of coverage, based on the nature of the risk, prior experience, insurer, coverage or other circumstances unique to the Consultant, the Project or the insurer.

9. **E-verify, Records and Audits.** To the extent applicable under A.R.S. § 41-4401, the Consultant warrant their compliance and that of its subconsultants with all federal immigration laws and regulations that relate to their employees and compliance with the E-verify requirements under A.R.S. § 23-214(A). The Consultant or subconsultant's breach of this warranty shall be deemed a material breach of the Agreement and may result in the termination of the Agreement by the City under the terms of this Agreement. The City retains the legal right to randomly inspect the papers and records of the other party to ensure that the other party is complying with the above-mentioned warranty. The Consultant and subconsultant warrant to keep their respective papers and records open for random inspection during normal business hours by the other party. The parties shall cooperate with the City's random inspections, including granting the inspecting party entry rights onto their respective properties to perform the random inspections and waiving their respective rights to keep such papers and records confidential.

10. **No Boycott of Israel.** To the extent A.R.S § 35-393 through § 35-393.03 are applicable, the parties hereby certify that they are not currently engaged in, and agree for the duration of the Agreement to not engage in, a boycott of goods or services from Israel, as that term is defined in A.R.S § 35-393.

11. **Attestation of PCI Compliance.** When applicable, the Consultant will provide the City annually with a Payment Card Industry Data Security Standard (PCI DSS) attestation of compliance certificate signed by an officer of Consultant with oversight responsibility.

12. **Notices.**

12.1 A notice, request or other communication that is required or permitted under this Agreement (each a "Notice") will be effective only if:

- a. The Notice is in writing; and
- b. Delivered in person or by overnight courier service (delivery charges prepaid), certified or registered mail (return receipt requested).
- c. Notice will be deemed to have been delivered to the person to whom it is addressed as of the date of receipt, if:
  - (1) Received on a business day before 5:00 p.m. at the address for Notices identified for the Party in this Agreement by U.S. Mail, hand delivery, or overnight courier service; or
  - (2) As of the next business day after receipt, if received after 5:00 p.m.

- d. The burden of proof of the place and time of delivery is upon the Party giving the Notice.
- e. Digitalized signatures and copies of signatures will have the same effect as original signatures.

12.2 Representatives.

- a. Consultant. Consultant's representative (the "Consultant's Representative") authorized to act on Consultant's behalf with respect to the Project, and his or her address for Notice delivery is:

Hazen and Sawyer  
 c/o Curtis D. Courter, P.E., Associate Vice President  
 1400 E. Southern Avenue, Suite 340  
 Tempe, AZ 85282

- b. City. City's representative ("City's Representative") authorized to act on City's behalf, and his or her address for Notice delivery is:

City of Glendale  
 c/o Martin A. Soma PE, Senior Civil Engineer  
 5850 W. Glendale Ave. Suite 315  
 Glendale, Arizona 85301

With required copy to:

City Manager  
 City of Glendale  
 5850 West Glendale Avenue  
 Glendale, Arizona 85301

City Attorney  
 City of Glendale  
 5850 West Glendale Avenue  
 Glendale, Arizona 85301

- c. Concurrent Notices.
  - (1) All notices to City's representative must be given concurrently to City Manager and City Attorney.
  - (2) A notice will not be deemed to have been received by City's representative until the time that it has also been received by the City Manager and the City Attorney.
  - (3) City may appoint one or more designees for the purpose of receiving notice by delivery of a written notice to Consultant identifying the designee(s) and their respective addresses for notices.
- d. Changes. Consultant or City may change its representative or information on Notice, by giving Notice of the change in accordance with this section at least ten days prior to the change.

**13. Financing Assignment.** City may assign this Agreement to any City-affiliated entity, including a non-profit corporation or other entity whose primary purpose is to own or manage the Project.

**14. Entire Agreement; Survival; Counterparts; Signatures.**

14.1 Integration. This Agreement contains, except as stated below, the entire agreement between City and Consultant and supersedes all prior conversations and negotiations between the parties regarding the Project or this Agreement.

- a. Neither Party has made any representations, warranties or agreements as to any matters concerning the Agreement's subject matter.
- b. Representations, statements, conditions, or warranties not contained in this Agreement will not be binding on the parties.

- c. Inconsistencies between the solicitation, any addenda attached to the solicitation, the response or any excerpts attached as **Exhibit A**, and this Agreement, will be resolved by the terms and conditions stated in this Agreement.

14.2 Interpretation.

- a. The parties fairly negotiated the Agreement's provisions to the extent they believed necessary and with the legal representation they deemed appropriate.
- b. The parties are of equal bargaining position and this Agreement must be construed equally between the parties without consideration of which of the parties may have drafted this Agreement.
- c. The Agreement will be interpreted in accordance with the laws of the State of Arizona.

14.3 Survival. Except as specifically provided otherwise in this Agreement, each warranty, representation, indemnification and hold harmless provision, insurance requirement, and every other right, remedy and responsibility of a Party, will survive completion of the Project, or the earlier termination of this Agreement.

14.4 Amendment. No amendment to this Agreement will be binding unless in writing and executed by the parties. Electronic signature blocks do not constitute execution for purposes of this Agreement. Any amendment may be subject to City Council approval.

14.5 Remedies. All rights and remedies provided in this Agreement are cumulative and the exercise of any one or more right or remedy will not affect any other rights or remedies under this Agreement or applicable law.

14.6 Severability. If any provision of this Agreement is voided or found unenforceable, that determination will not affect the validity of the other provisions, and the voided or unenforceable provision will be reformed to conform with applicable law.

14.7 Counterparts. This Agreement may be executed in counterparts, and all counterparts will together comprise one instrument.

**15. Term.**

15.1 Renewals. The term of this Agreement commences upon the effective date and continues for a two (2) year initial period. The City may, at its option and with the approval of the Consultant, extend the term of this Agreement an additional two (2) years, renewable on an annual basis. Consultant will be notified in writing by the City of its intent to extend the Agreement period at least thirty (30) calendar days prior to the expiration of the original or any renewal Agreement period. Price adjustments will only be reviewed during the Agreement renewal period and will be a determining factor for any renewal. There are no automatic renewals of this Agreement.

15.2 Extension for Procurement Process. Upon the expiration of the Term of this Agreement, including the initial term and any renewals, at the City's sole discretion, this Agreement may be extended on a month-to-month basis for a maximum of six (6) months to allow for the City to complete its procurement process to select a vendor to provide the services/materials similar to those provided under this Agreement. The City will notify the Contractor in writing of its intent to extend the Agreement at least thirty (30) calendar days prior to the expiration of the Term. Any extension provided under this subsection will continue under the same terms and conditions as in effect immediately prior to the expiration of the then-current term.

**16. Dispute Resolution.** Any controversy or claim arising out of or relating to this contract, or the breach thereof, shall be settled by arbitration administered according to the American Arbitration Association's Commercial Arbitration Rules, and judgment on the award rendered by the arbitrator may be entered in any court having jurisdiction thereof.

**17. Exhibits.** The following exhibits, with reference to the term in which they are first referenced, are incorporated by this reference.

Exhibit A Project  
Exhibit B Scope of Work  
Exhibit C Schedule  
Exhibit D Compensation

The parties enter into this Agreement effective as of the date shown above.

City of Glendale,  
an Arizona municipal corporation

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By: Kevin Phelps  
Its: City Manager

ATTEST:

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Julie K. Bower (SEAL)  
City Clerk

APPROVED AS TO FORM:

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Michael D. Bailey  
City Attorney

Hazen and Sawyer,  
a Corporation



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By: Curtis D. Courter  
Its: Associate Vice President

**EXHIBIT A**  
**Professional Services Agreement**

PROJECT

**EXHIBIT A**  
**Professional Services Agreement**

PROJECT

**A. PROGRAM DESCRIPTION**

Project (Program) Description – The City of Glendale (COG) Water Services Department (WSD) previously contracted with the Program Manager (Consultant) to provide program management services for developing a phased groundwater well program. The first phase of the program, which is now complete, identified specific well site alternatives, and provided costs, a phased schedule consistent with the Integrated Water Master Plan (IWMP) recommendations for groundwater needs by 2025, 2030 and 2055, and identified the prioritization for near-term projects. This phase of the well program will include engineering services for design, drilling, testing and construction of both new and replacement groundwater wells by 2025.

The 2025 Well Implementation Program will include design and construction oversight of two potable water wells located within Zone 3, Well AR-15 and the Arrowhead Hospital Well.

**EXHIBIT B**  
**Professional Services Agreement**

SCOPE OF WORK

**EXHIBIT B**  
**Professional Services Agreement**

**PROJECT SCOPE OF WORK**

The CONSULTANT will provide program management services for the design, drilling and construction of two replacement groundwater wells. CONSULTANT will be responsible for planning, design, construction administration and inspection of these two wells.

**A. GENERAL PROGRAM MANAGEMENT SERVICES**

**1. PROGRAM MANAGEMENT**

- 1.1 Program Management Status Reports and Monthly Meeting: CONSULTANT shall lead a kickoff and monthly meetings and provide Program status information to COG's Program manager and generate and distribute a monthly Program Management Status Report (PMSR) that includes updated program, design and construction schedules and cost status updates. Consultant will also lead monthly progress and coordination meetings developing agendas, content and minutes for each meeting.
- 1.2 Manage Subconsultants: CONSULTANT will select and secure services of those firms providing specific or specialized services for the Program as accepted by COG in the CONSULTANT's fee proposal. The CONSULTANT will prepare the scope of services performed by each subconsultant and will monitor the subconsultant's work for timeliness and that it meets Program requirements. The CONSULTANT will coordinate the efforts of the subconsultants and incorporate any deliverables that are prepared by the subconsultant(s) into the appropriate Program Management documents. The CONSULTANT will review subconsultant's progress payments for accuracy and completeness and make payments as provided in the subconsultant's agreement.
- 1.3 Quality Assurance / Quality Control (QA/QC): CONSULTANT will maintain a Quality Control Program focused on providing a product that is in accordance with the industry's accepted standard of care. The program shall include quality control checklists and in-house reviews. At the start of the project, the CONSULTANT will meet with COG to review program goals, design guidelines and requirements. QC reviews will be completed on each deliverable and review comments addressed before submission to COG.

Designs will be prepared in accordance with Maricopa Association of Governments (MAG) Standard Specifications and Details, City of Glendale MAG Supplemental Specifications and Details, and the current City of Glendale Engineering Design Standards.

**2. COMMUNITY OUTREACH**

- 2.1 Public Outreach: Public meetings will be held for each project during the design phase to ensure that community input is received and that citizens are kept informed on the content and status of the various projects. CONSULTANT shall organize and attend these meetings and provide support to COG, as required.

CONSULTANT shall organize and attend planning meetings with internal COG departments to prepare for these meetings. CONSULTANT will develop and provide all graphics, plans and renderings, acceptable to COG, for review at the public meetings. CONSULTANT will assemble meeting documents in preparation for these meetings, coordinate with COG personnel to schedule and conduct these meetings, and prepare and issue minutes accordingly.

- 2.2 Public Participation Meetings: CONSULTANT will organize and lead public involvement meetings for the overall program, and each planned well. Meetings will be scheduled at the onset of each project by the CONSULTANT, in coordination with COG. These meetings may occur with COG residents, HOAs, Councils and/or Advisory Committees relative to each project.
- 2.2.1 Provide planning and coordination for a public meeting for the overall program, including attending a planning meeting, coordinating a venue, preparing for and attending the public meeting. CONSULTANT shall provide information or copy to disseminate information through Glendale's existing communication structure. This may include water bill inserts, a webpage on GlendaleAz.com, and information for social media or local publications.
- 2.2.2 Public Outreach for each well project: CONSULTANT will perform public outreach for the detailed design of the first two wells. This effort includes preparation for and attending a meeting with Homeowner's Associations (HOAs) adjacent to the planned AR-15 and Arrowhead Hospital Wells to provide information on the projects.

**Task A Assumptions:**

- 2025 Phase program duration is 32 months from notice to proceed. Meetings are assumed to be held monthly during design, which is anticipated to extend to January 2023 and once per quarter during construction, which is anticipated to begin prior to design completion and extend to August 2024. Subsequent phases of the program, if necessary, will be defined separately and are not included in the Base Scope of Services or the Compensation defined in Exhibit C.
- All program documents and deliverables are to be provided electronically unless otherwise specified.
- Task 3.1 is for outreach program set up, 3.2.1 is internal planning of specific public outreach events, 3.2.2 is for public outreach and participation meetings (3 total) for the two wells. Additional meetings that may be identified as the program is developed can be provided under the Continuing Programmatic Services Allowance.

**Task A Deliverables:**

- Kickoff meeting agenda and minutes
- Meeting agendas and minutes
- Monthly progress and financial reporting
- Outreach collateral and documentation

## **B. PRE-DESIGN PHASE**

### **1. PROGRAM MANAGEMENT**

#### **1.1 Surveying and Utility Coordination:**

- 1.1.1 **Topographic Survey:** Prepare an exterior topographic survey for the AR-15 well site to establish horizontal and vertical ground control and to provide base mapping information, with 1-foot contour intervals, for the existing conditions and above grade exterior features. The survey limits will include the parcels for the proposed Early Action Well sites and up to 1 mile of associated water transmission main alignment per site. The survey subconsultant will locate existing topography, above grade site features, and Bluestake markings. All topographic information collected will be based on City of Glendale horizontal and vertical control monuments within one mile of the project limits. The topographic survey for the Arrowhead Hospital Well was prepared in the prior phase.
- 1.1.2 **Base Map Preparation.** Create a base map for the existing AR-15 site in AutoCAD that incorporates the survey data collected. The map will be presented at scales that allow the site to be illustrated on a single site plan. The map will illustrate above ground features such as buildings, walls, electrical services, access ways, piping, driveways, etc. Improvements that can be represented by single points or lines, such as poles and site walls, will be represented with symbols and line types. Below ground improvements will not be included in the topographic survey but will be incorporated into the drawings by the design team based on existing as-builts and field measurements, where possible. The base map for the Arrowhead Hospital Well was developed in the prior phase.
- 1.1.3 **Utility Coordination.** CONSULTANT will contact utilities to collect maps from utilities having service areas near the AR-15 well site. The utility information provided by the maps will be added to the project's base maps. Survey subconsultant will verify the information provided within the proposed limits of construction to the extent possible through the topographic survey and site reconnaissance. CONSULTANT will also submit an internal utility locating request through the City Water Services Department to have on-site COG utilities marked in the field. The utility coordination for the Arrowhead Hospital Well site was completed in the prior phase.
- 1.1.4 **Potholing.** Where existing utility elevations are necessary for the determination of conflicts, CONSULTANT shall identify possible conflict locations and conflicting utilities and develop a potholing plan to identify accurate horizontal and vertical location of the utilities prior to completion of the 60% plans. The CONTRACTOR will perform the potholing.
- 1.1.5 **Geotechnical:** CONSULTANT will review available published and in-house geotechnical reports, topographic information, soil surveys, geologic literature and aerial photographs of the project area.
- #### **1.2 Well Development Planning, Well Design Standards and Detailed Well Design**
- 1.2.1 **Detailed Well Specifications:** Detailed well specifications for the Arrowhead Hospital Well have been created as part of the prior project phase. The site-specific well specifications address local issues (e.g., discharge of groundwater, noise abatement, etc.) and will only be revised if requested by COG or if changes to site conditions occur following the completion of

the prior project phase. The Arrowhead Hospital Well preliminary well design will be updated to a final well design based on water quality and water quantity data obtained from Task D1.6. Detailed, site-specific specifications for AR-15 will be developed under this task. The AR-15 Well Specifications will be provided to COG for review and approval. Detailed Well Specifications for other wells identified through the program to be included in Phase 1, if any, will be developed as part of a contract amendment.

- 1.2.2 Permitting: CONSULTANT will develop the permit application and notice of intent to drill a new, non-exempt well for Well AR-15 within an Active Management Area. A well spacing/well impact analysis, permit application and notice of intent for the new Arrowhead Hospital Well was prepared under allowance in the prior phase.
- 1.3 CONTRACTOR Pre-Submittal Meeting: CONSULTANT shall conduct, or assist COG in conducting, CONTRACTOR Pre-Submittal Meetings during which the CONTRACTOR shall receive information regarding the projects, schedule, costs, administrative and other project parameters and requirements.
- 1.4 Well Installation, Testing and Construction: CONSULTANT's hydrogeological subconsultant will provide construction administration and inspection services during the installation and testing of wells by the CONTRACTOR. Once water quantity and water quality data are available, CONSULTANT will complete final well design for Arrowhead Hospital Well and then subsequently for AR-15. CONTRACTOR will then construct the Arrowhead Hospital Well, perform well development and testing (including pumping and recovery and plumbness and alignment testing) before remobilizing to develop AR-15. Oversight will be provided from initial mobilization and sound barrier construction through final well video and capping for both wells.
  - 1.4.1 Borehole Drilling and Analysis: CONSULTANT's hydrogeological subconsultant will provide inspection services during the drilling of the two wells on a daily basis (typically 8 hours per day, 7 days per week). Hydrogeological subconsultant will analyze the drilled cuttings, collected at 10-foot intervals by the driller, and prepare a descriptive lithologic log of the drilled material. A sample of the drilled cuttings from each 10-foot interval will be placed in chip trays, which will be provided to COG for archival purposes. This Scope of Services assumes each borehole, to a depth of up to 1,500 feet, will be drilled over two 10-day periods.

Drilled cuttings from selected intervals of each borehole (up to five intervals) will be submitted for sieve analysis by a geotechnical laboratory with a rush turn-around time requested. The sieve analysis results will be used to determine the appropriate well screen slot size and filter pack bead size necessary to prevent sand invasion and maximize flow while the well is in use. CONSULTANT will provide for geotechnical laboratory services through a subconsultant of the hydrogeological subconsultant and fees for the laboratory services are included in the geotechnical services allowance.
  - 1.4.2 Geophysical Logging: After the pilot boreholes are drilled to total depth, geophysical logging will be conducted to provide additional subsurface hydrologic and geologic information using multiple downhole tools. CONSULTANT's hydrogeological consultant will subcontract the geophysical logger and costs for their services to log two boreholes up to 1,500 feet are included in this task as an allowance. The reamed borehole will also be logged in addition to

the final well for deviation. The CONTRACTOR will provide geophysical logging for the reamed borehole and final well logging.

- 1.4.3 Depth-specific (Zonal) Groundwater Sampling, Testing, and Analysis: Based on the review of the geophysical and lithologic logs, CONSULTANT's hydrogeological subconsultant will select up to seven (7) discrete intervals for collection of depth-specific (zonal) groundwater samples from each pilot borehole. These depth-specific samples will be collected using the temporary well method.

CONSULTANT's hydrogeological subconsultant will monitor the field parameters (i.e., temperature, electrical conductivity, oxidation-reduction potential, pH, dissolved oxygen, and sand content) of the pumped discharge water for approximately two hours prior to sample collection. After approximately 12 hours of purging each zone and the stabilization of field parameters has occurred, CONSULTANT's hydrogeological subconsultant will collect zonal water-quality samples to be used to prepare a final design for each well.

Each zonal sample will be collected by CONSULTANT's hydrogeological subconsultant and delivered to a certified analytical laboratory for testing. A duplicate sample will also be collected from one of the sample intervals in the well and will be provided to the same analytical laboratory and labeled as a "blind" sample, for Quality Assurance/Quality Control (QA/QC) purposes. Each sample will be analyzed for nitrate (NO<sub>3</sub>-N), fluoride (F), chromium (Cr), arsenic (As), and total dissolved solids (TDS). In addition, the zonal samples will be analyzed for per- and polyfluoroalkyl substances (PFAS). Arsenic and chromium will be analyzed using the inductively coupled plasma mass spectrometer (ICP-MS) method, with a maximum detection limit of 0.005 milligrams per liter (mg/L). The water samples will also be analyzed for the common anions and cations: calcium (Ca), magnesium (Mg), sodium (Na), potassium (K), alkalinity as bicarbonate (as CaCO<sub>3</sub>), sulfate (SO<sub>4</sub>), and chloride (Cl), which will enable LRE to conduct an ion balance for QA/QC purposes. The samples will be submitted to the laboratory under chain-of-custody for rush turn-around. The analytical laboratory will be retained by CONSULTANT's hydrogeological subconsultant and laboratory costs are included in the laboratory scope of services allowance.

After the zonal sample has been collected at each interval, the pump will be shut down and the water level will be monitored. Once the water level has stabilized, a falling head ("slug") test will be conducted to estimate the hydraulic conductivity of the interval. Up to three slugs will be performed at each zone to gain a more accurate hydraulic conductivity representation. It is assumed that each slug test can be conducted within two (2) hours. If the hydraulic conductivity of any zone/interval is inadequate for the water table to return to its static level within one (1) hour after shutting off the sampling pump, COG will be contacted to discuss the costs versus the value of the specific data collection, to avoid excessive costs related to drilling rig standby time.

- 1.4.4 Well Design, Borehole Ream, Caliper Logging, Materials Check: After the completion of zonal groundwater sampling operations and receipt of the analytical reports and hydraulic conductivity results, CONSULTANT will meet with the CONTRACTOR and COG to finalize the well design. Evaluation of the data collected up to this point will be considered for well design, including zonal samples and slug test data with production and water quality estimated at depth, lithologic log of drilled cuttings, and geophysical logs. Once the final design has been determined and approved by COG, it will be provided to the drilling contractor. At this time,

the borehole will be cleaned out and/or reamed to its final depth and diameter. During the reaming of the borehole, CONSULTANT's hydrogeological subconsultant will remain on-call in the event that unanticipated conditions or problems arise. The driller will be contractually obligated to document drilling conditions, penetration rates, etc. during the reaming process. After completion of borehole reaming, a final caliper log survey and magnetic deviation survey will be conducted by a well survey subconsultant and costs for this service are included in the well development subconsultant scope of services allowance.

Once the drilling company has received the delivery of well construction materials listed in the technical specification and/or the final well design, CONSULTANT's hydrogeological subconsultant will perform a comprehensive material check at the well site to confirm the materials are the same as specified and will notify the CONTRACTOR immediately if any deviations from the technical specification and/or final well design are identified.

- 1.4.5 Well Installation and Well Development: CONSULTANT's hydrogeological subconsultant will provide inspection services during well construction on a continuous basis (24-hours per day) to ensure drilling contractor's adherence to the materials, methods, and technical standards that have been specified. It is estimated that each well construction will take place over a one week period. Continuous inspection of the casing, screen, and annular material installation will assure that the well installation is conducted in compliance with the materials and construction standards that have been specified in the final well design and/or technical specifications. CONSULTANT's hydrogeologic subconsultant will provide inspection services during critical periods of well development (typically 10 hours per day for an estimated on-week period). The well development includes both swab and airlift development and the pump and surge development. CONSULTANT's hydrogeological subconsultant will document the construction materials, installation techniques, and well development techniques via pipe tallies, cement grout records and receipts, development records/forms, etc. Samples of the filter pack material and cement grout will be collected to document conformance with the project specifications, and information obtained will be used to prepare a detailed As-Built diagram of the well for inclusion in the Well Completion Report.
- 1.5 Well Testing: This task series outlines the field activities related to well testing, including the step-rate and constant-rate pumping tests, static and dynamic spinner logging, and depth-specific sampling.
  - 1.5.1 Step-Rate Pumping Test: The step-rate pumping test will consist of up to five (5) different pumping rates (steps), each approximately two (2) hours in duration. CONSULTANT's hydrogeological subconsultant will record static and pumping water-level measurements, monitor the discharge for water-quality field parameters, including sand content, electrical conductivity, oxidation-reduction potential, pH, dissolved oxygen, and temperature.
  - 1.5.2 Constant Rate Pumping Test and Water Quality Analysis: Once water-level recovery of 95% or greater has occurred following the step-rate pumping test, a constant-rate aquifer test of approximately 24 hours will be conducted. During the constant-rate aquifer test, CONSULTANT's hydrogeological subconsultant will collect water-level measurements at the optimum pumping rate of the well.

Near the end of the constant-rate pumping test, CONSULTANT's hydrogeological subconsultant will collect composite water samples from the well discharge at the land surface.

CONSULTANT's hydrogeological subconsultant will coordinate with an Arizona Department of Health Services-certified laboratory for Safe Drinking Water Act Phase I/Phase V (New Source Approval) constituents. The CONSULTANT's hydrogeological subconsultant will ensure that all appropriate sampling procedures are met during collection and at the time of sample delivery. The samples will be submitted to the selected laboratory for normal turnaround time. Laboratory costs for two New Source samples are included in the scope of services allowance.

After the cessation of constant-rate pumping of the well, CONSULTANT's hydrogeological subconsultant will conduct a water-level recovery test for a period of 24 hours. CONSULTANT's hydrogeological subconsultant will remain on site for approximately two hours after pump shutdown to measure water levels with the manual sounder and to ensure the pressure transducer data-logger is working properly.

The analytical results of the groundwater samples will be summarized in a table in the Well Completion Report. Water-level measurements and water-quality field parameters of the discharge water will be tabulated.

- 1.5.3 Spinner Logging and Depth-Specific Sampling: A dynamic (pumping) spinner flowmeter survey will be conducted near the end of each constant-rate aquifer test. A pumping spinner flowmeter survey provides a vertical flow profile of the well. CONSULTANT's hydrogeological subconsultant will include the necessary accommodations for the spinner logging in the technical specifications for the well. The spinner logging will include a minimum of three (3) dynamic logging runs (downward, at different line speeds). The dynamic spinner survey will be conducted after the well has been pumped to allow hydrologic conditions in the aquifer to stabilize prior to the start of the survey. In addition to providing oversight and coordination of the spinner survey, CONSULTANT's hydrogeological subconsultant will provide recommended sampling depths for collection of six (6) depth-specific groundwater samples from the well, based on the results of the spinner flowmeter survey. The objective of this discrete water quality sampling is to establish a vertical profile of baseline water quality. In addition, one composite water sample and one QA/QC sample will be collected. The water samples will be submitted to a certified analytical laboratory for testing of, at a minimum, NO<sub>3</sub>-N, F, Cr, As, TDS, Ca, Mg, Na, K, CaCO<sub>3</sub>, SO<sub>4</sub>, and Cl concentrations.
- 1.6 Data Analysis and Reporting: This task series outlines the data analysis and reporting activities related to the well drilling and installations, and well testing.
  - 1.6.1 Data Analysis: CONSULTANT's hydrogeological subconsultant will compile and analyze data collected as part of well installation and testing activities. These data are anticipated to include daily field logs, lithological logs, geophysical logs, well video survey, well development information, aquifer testing data, static and dynamic flowmeter data, field water-quality measurements, and composite (New Source), depth-specific, and zonal sample analytical data.

These data will be organized and presented in the form of tables, figures, and graphs. Aquifer test data will be analyzed using AQTESOLV™ to estimate aquifer properties in the vicinity of the wells. Depth-specific concentrations for constituents of concern will be calculated using spinner log and depth-specific sample data, and mass balance principles. Copies of field data, video survey, geophysical logs, and analytical test reports will be provided to COG in the Well Completion Report.

- 1.7 Well Completion Report: CONSULTANT's hydrogeological subconsultant will prepare a Well Completion Report summarizing all work conducted during the installation and testing of the new well. The Well Completion Report will include any documentation collected during well drilling and construction process including, but not limited to: field notes, pipe tallies, grout records, penetration rate logs, geophysical logs, the lithologic log, zonal groundwater sample results, falling head test results, aquifer test results, spinner logging results, the final plumbness and alignment analysis, the final video log, and the analytical results of water-quality samples that were collected. The Well Completion Report will present recommendations for the optimum pumping rate and pump setting based on these analyses, along with a detailed As-Built drawing of the new well.

## 2. TIME MANAGEMENT

- 2.1 Design Phase Milestone Schedule: CONSULTANT shall prepare the Milestone Schedule for the Design phase. The Design Phase Milestone Schedule shall be prepared in consultation with the CONTRACTOR once the CONTRACTOR has been selected. The Design Phase Milestone Schedule shall include milestones for design development and contract documents, and shall include all affected agency reviews, permitting milestones and utility relocation information.

### Task B Assumptions:

- Topographic survey and base map preparation for the Arrowhead Hospital Well has been completed under the allowance in the planning phase of the Well Program.
- Potholing will be performed by the CONTRACTOR.
- Geotechnical consists of reviewing available existing information and incorporating it into the design and/or recommending additional geotechnical investigations. If additional geotechnical investigations are required, they will be included under the geotechnical allowance.
- COG will develop and submit New Source Approval Applications.
- New right-of-way (ROW) and easements, including, but not limited to new roadway ROW, public utility easements, drainage easements and temporary construction easements are not included.

### Task B Deliverables:

- Topographic survey of AR-15 well site and associated transmission and sewer corridors
- Base map of AR-15 well site and associated transmission corridors
- Utility coordination letters
- Potholing Plans for each well and associated transmission mains
- Well development detailed specifications for Well AR-15
- CONTRACTOR pre-submittal meeting collateral
- CONTRACTOR pre-construction and well drilling phase procurement documents
- Enhanced new source approval documents
- Detailed design schedule
- Well development testing and oversight documentation

## C. DESIGN PHASE

### 1. PROGRAM MANAGEMENT

1.1 CONSULTANT shall serve as the engineer of record for the development of two wells, one is a replacement of Well AR-15 (55-625052) and one will be a new well near 64<sup>th</sup> Drive and West Sack Road (referred to as the Arrowhead Hospital Well).

1.1.1 Preliminary Well Site Design: CONSULTANT will develop the preliminary design of Well AR-15 and the Arrowhead Hospital Well sites. The design components that will be evaluated include:

- Site access
- Preliminary site layout - including on-site retention and well laydown areas
- Well site equipping - including pump and motor design, desander (if required), pump to waste, control valve, and VFD's
- Electrical/I&C components – including power, lighting, telemetry, SCADA, PLC programming and logic, fiber to the site, and coordination for the APS electrical service
- Perimeter wall and architectural enhancements to match the surrounding design requirements
- Water transmission main alignment
- Hydraulic modeling – evaluate capacity of existing sewer and impact of pump flush-to-waste
- Pump to waste line alignment – For the Arrowhead Hospital Well, it is assumed that a line will be designed along 64<sup>th</sup> Dr to Union Hills Dr and tie-in to existing sewer or storm sewer depending on the available capacities. For Well AR-15, it is assumed that a pump to waste line will be installed along W Rose Garden Ln and tie-in to an existing sewer along 75<sup>th</sup> Ave (pending capacity evaluation).
- Existing utility coordination - interconnects to the existing infrastructure
- Pump and motor laydown area and pump rig configuration during maintenance

1.1.2 Preliminary Engineering Report and Drawings: CONSULTANT will prepare a report describing the basis of design criteria for all components of the infrastructure improvements for both Wells. Deliverables will include:

- Prepare Preliminary Engineer Report summarizing the investigation and analyses completed during this phase and establish the design parameters, criteria and concepts necessary for preparation of detailed plans and specifications
- 30% drawings including preliminary layouts of the equipment and facilities
- Aerial and perspective renderings to reflect impact to existing neighbors
- Quality Assurance/Quality Control review of documents
- Preliminary drawings and an outline of specifications needed to supplement the PDSM base specifications

1.1.3 Detailed Design: CONSULTANT will perform final design of the two wells based on comments received during the preliminary design stage. CONSULTANT will utilize available PDSM base technical specifications and standard details to the largest extent possible. These documents will be submitted to COG for review and comment at the 60% and 90% completion

stages of design. The 100% Design Documents will also be submitted to the relevant agencies for review and approval to acquire the necessary permits. City and agency review comments on each submittal will be addressed and written responses will be documented in a tabular format for each of the project's progress submittals. The intent of the 60%, 90%, and Final (For Construction) stages of this project are to prepare a set of Contract Documents based on the design concepts and criteria developed in the 30% preliminary design phase of this project. Detailed plans and specifications will be prepared at the following milestones:

- 1.1.3.1 60% Design: At the 60% stage, CONSULTANT will provide definite design conclusions based on the continued design development and on the comments received during 30% stage review. The plans will have further developed the approved 30% Stage design and cost opinion. The design documents during this phase will clearly identify the developed design solutions and all major features and components. CONSULTANT will provide information to the CONTRACTOR for development of a 60% Guaranteed Maximum Price (GMP) model.
- 1.1.3.2 90% Design: CONSULTANT will have built upon the comments received during the 60% stage review and will be nearly complete design plans. At this stage, CONSULTANT anticipates that there will be no major design alterations from the plans approved during the 60% stage. This submittal will likely form the basis of the required regulatory agency submittals. The CONTRACTOR will update the GMP to reflect the more refined design. Upon approval of this stage of the plans by COG and the permitting agencies, CONSULTANT will begin execution on the final construction documents for bidding.
- 1.1.3.3 100% Design: CONSULTANT will provide a complete set of plans and technical specifications necessary to bid each project. This submittal will resolve any outstanding issues from the 90% stage and be fully coordinated between all disciplines and projects. During development of the final bid documents, CONSULTANT will prepare any remaining governmental submittals and attend all public hearings/ meetings for this phase of the project.
- 1.2 Design Kick-Off Meeting: At the start of the Design Phase, CONSULTANT shall conduct a project conference attended by the COG, the CONTRACTOR, if selected, and other stakeholders. During the meeting, CONSULTANT shall review the Scope of the Project, the Program Management plan, the Master Schedule, the proposed Design Phase Milestone Schedule, the Program and Construction Budget and the MIS.
- 1.3 Interface with Utility Owners: CONSULTANT shall be responsible for coordination of utility companies, and with CONTRACTOR assistance, develop a mitigation plan for relocation of facilities where deemed necessary. CONSULTANT is responsible for ensuring special provisions are developed and a clearance/conflict letter prepared acknowledging confirmation from all utility companies. Copies of these letters shall be forwarded to COG's Representative.
- 1.3.1 CONSULTANT shall identify all utility stakeholders that might impact the project and shall notify each of the project scope and schedule at the 30% level of plan completion. The CONSULTANT shall forward a set of plans to each utility with facilities potentially impacted by the project. The CONSULTANT shall send a transmittal letter with the 30% plans requesting each utility review the plans.

- 1.3.2 At the 90% level of completion, the CONSULTANT will forward a set of plans to each utility for final review and comments. CONSULTANT incorporate all completed utility relocations into the final plans and will notify COG of any outstanding utility relocations.
- 1.4 Approvals by Outside Agencies and Utility Companies
- 1.4.1 CONSULTANT shall prepare and provide COG with a list of all permits and approvals required for the Program and the responsible party for obtaining each permit or approval. CONSULTANT shall be responsible for coordinating the permit and approval process, attending meetings with the regulatory agencies, help negotiate permit conditions, track permits and approvals through the review process, respond to review comments, and provide limited public hearing support in the form of exhibits.
- 1.4.2 Approval to Construct/Approval of Construction Applications: CONSULTANT, with assistance from the CONTRACTOR, will develop and submit applications for Approval to Construct (after the 90% submittal) and Approval of Construction (upon completion of construction) for water distribution system pipelines, pressure reducing valve stations, ground water production facilities and other water system infrastructure.

**Task C Assumptions:**

- Assumes 1 CONTRACTOR for both well projects and up to 2 GMPs
- Assumes that treatment, well site or centralized, is not needed
- Legal descriptions of ROW and easements would be provided by the COG. ROW agents, if necessary, will be procured separately by COG.
- City Engineer is responsible for verifying prior rights documentation submitted by the utility companies represent the utility facility and project area affected by the utility relocation.
- Radio Path Studies are not included in the base scope of work. If radio path studies are needed, they would be completed under the Continuing Programmatic Services Allowance.
- Electrical distribution and control equipment will be located outside.
- Standby engine generator will be installed on an at grade concrete pad. Standard Tier 2 or Tier 3 emissions rating for generator. Additional Tier level or exhaust requirements to meet local air quality restrictions or ordinances will not be required.
- All necessary engine related information required for air permitting will be obtained from engine-generator manufacturer by others.
- Arc flash analysis will be included in the specifications to be performed by the contractor.
- Treatment other than chlorine feed is not required.
- SCADA and PLC configuration by others.
- Conduit and cable schedules, and detailed wiring diagrams are not necessary nor included.
- COG will coordinate with all utilities for relocations that are not made by the time the drawings are final.

**Task C Deliverables:**

- Preliminary well site design and renderings for AR-15 (preliminary design for Arrowhead Hospital Well was performed during the previous project phase)
- Draft and Final PER, 30% drawings and specifications table of contents
- Draft and Final 60% drawings and specifications
- Draft and Final 90% drawings and specifications

- Draft and Final 100% drawings and specifications
- Design milestone utility coordination documentation
- Utility relocate record drawings

## **D. PRE-CONSTRUCTION ACTIVITIES**

### **1. GMP ANALYSIS**

- 1.2 GMP Proposal: CONSULTANT shall review GMP proposals submitted by CONTRACTOR and return the GMP Proposal to CONTRACTOR to make adjustments as necessary to the GMP Proposal required by such inconsistencies or inaccuracies.

### **2. COMPETITIVE BIDDING AND SUB-BIDS**

- 2.1 CONSULTANT shall monitor the solicitation and receipt of sub-bids pursuant to the Contract between COG and CONTRACTOR. CONSULTANT shall make written recommendations to COG regarding such sub-bids.

### **3. OTHER PRE-CONSTRUCTION ACTIVITIES**

- 3.1 Pre-Construction Conference: In consultation with COG, and CONTRACTOR, CONSULTANT shall conduct a Pre-Construction Conference during which CONSULTANT shall review the Program organization, communication protocols, security, responsibilities and other general project procedures and other matters related to the Program.
- 3.2 Inter-Agency Coordination: CONSULTANT shall coordinate Program implementation with COG departments, utilities and other agencies to minimize city wide disruption and reduce construction costs. CONSULTANT shall attend periodic utility coordination calls and be prepared to discuss potential conflicts that may arise.

#### **Task D Assumptions:**

- Assumes 1 CONTRACTOR and up to 2 GMPs
- Assumes 1 Pre-Construction Conference is held.
- Assumes up to two utility coordination calls of no more than an hour each. Agendas and minutes are responsibility of others.

#### **Task D Deliverables:**

- Cost estimate, schedule of values and GMP proposal reviews
- Bidding reviews

## **E. CONSTRUCTION PHASE**

### **1. PROGRAM MANAGEMENT**

- 1.1 Management and Construction Phase Communication Procedures: CONSULTANT shall provide construction/contract administration as COG's representative and establish and implement coordination and communication procedures among CONSULTANT, COG, and CONTRACTOR. As COG's representative, CONSULTANT shall be the party to whom

requests for information, submittals, CONTRACTOR schedule adjustments, substitution requests, change order requests and payment applications shall be submitted, processed, approved, and returned to the CONTRACTOR.

- 1.2 Construction Administration Procedures: CONSULTANT shall establish and implement procedures for expediting and processing requests for information (RFI's); review and approval of shop drawings, material and equipment sample submittals, contract schedule adjustments; change orders; material and equipment substitution requests; and payment requests. CONSULTANT shall establish and maintain logs for tracking all relevant information related to the above.
- 1.3 Construction Observation: CONSULTANT shall establish and implement a program to observe and monitor the quality of the construction. The purpose of the program shall be to identify defects and deficiency in the work of the CONTRACTOR. Construction observations for the project shall be performed by personnel of CONSULTANT with sufficient expertise to determine whether the construction is proceeding in accordance with the Construction Contract Documents. Construction observation shall be under the direct supervision of an engineer(s) registered in the State of Arizona and qualified to perform this work. While CONSULTANT shall not be responsible for construction means, methods, techniques, sequences and procedures employed by the CONTRACTOR in the performance of its contract, CONSULTANT shall nevertheless advise COG whether the construction means, methods, techniques, sequences or procedures will delay the work or cause a defect in the work. CONSULTANT shall maintain daily job reports. CONSULTANT may from time to time, issue work directives, or field orders, which consist of minor changes in the work not involving an adjustment in the GMP or the Contract Time, but consistent with the overall intent of the Contract Documents. CONSULTANT is authorized to reject work and transmit to COG and CONTRACTOR a notice of nonconforming work when the Work does not conform to the requirements of the Contract Documents. CONSULTANT is not authorized as a part of this service to change, revoke, alter, enlarge, relax or release any requirements of the Contract Documents or to approve or accept any portion of the Work not performed in accordance with the Contract Documents. In the event the CONTRACTOR fails to correct deficient work, CONSULTANT shall issue a stop work order on behalf of COG until such deficiencies are corrected. No action taken by CONSULTANT shall relieve the CONTRACTOR from his obligation to perform his work in strict conformity with the Contract Documents and in strict conformity with all applicable laws, rules and regulations.
- 1.4 Engineering Services During Construction
  - 1.4.1 CONSULTANT shall review submittals for shop drawings, project information, shop and mill test results and alternate products for compliance with the Contract Documents. Upon review, submittals shall be marked with appropriate comments and returned to the CONTRACTOR for action.
  - 1.4.2 CONSULTANT shall respond to Requests for Information and issue, as necessary, written and verbal interpretations and clarifications of the Contract Documents. CONSULTANT shall prepare sketches to clarify Contract Documents where necessary.

- 1.4.3 The CONSULTANT shall respond to requests for change orders by the CONTRACTOR. This work will involve CONSULTANT's preparation of change order documents, including preparation of necessary sketches, if required.
- 1.4.4 CONSULTANT shall respond to requests from the field staff for recommendations regarding Work Change Directives. Written recommendations will be provided for all design and engineering questions and revisions.
- 1.5 Project Site Meetings: CONSULTANT's onsite construction professional shall conduct weekly coordination meetings at the project site with the CONTRACTOR, COG, and/or other stakeholders as needed. CONSULTANT shall record, transcribe and distribute minutes to all attendees, COG and CONTRACTOR.
- 1.6 Construction Quality Assurance (Inspections and Testing): Technical or special inspections required in the Contract Documents per IBC, and testing provided by others shall be directed, scheduled, and monitored by CONSULTANT. CONSULTANT shall be provided a copy of all inspection and testing reports on the day of the inspection or test or within a reasonable time period. CONSULTANT is responsible for providing the test results to CONTRACTOR and COG. In the event of a failed test, re-testing will be performed as directed in the Contract Documents.
- 1.7 Review of Requests for Changes to the Contract Time and GMP: CONSULTANT shall review the contents of requests for changes to the contract work, time or GMP submitted by the CONTRACTOR, assemble information concerning the request to determine the cause of the requests and make written recommendations to COG with respect to acceptance of the requests. CONSULTANT will implement COG's decisions regarding all requests for changes. All changes to the Contract Documents between COG and CONTRACTOR shall be only by change orders executed by COG.
- 1.8 System Integration, Startup and Testing: COG will provide integration services. CONSULTANT shall develop the overall plan and functional control descriptions for integrating new wells into the water system. CONSULTANT shall work with the CONTRACTOR to develop and oversee testing protocols. CONSULTANT shall work with COG and the CONTRACTOR to develop and implement startup plans.
- 1.9 Record Drawings, Operation and Maintenance Materials: As required by the Contract Documents, CONSULTANT shall receive from the CONTRACTOR red-line construction record drawings, operation and maintenance manuals, warranties and guarantees for materials and equipment installed on the project and review such documents for completeness and submit documents to COG. Upon verification of the red-line construction record drawings for correctness, CONSULTANT shall prepare the as-built drawings. Each plan sheet in the set shall be marked "As-Built". In addition, if the project requires certification by Maricopa County Environmental Services Department or the Arizona Department of Environmental Quality, CONSULTANT shall obtain such certification.
- 1.10 Substantial and Final Completion: In consultation with COG's inspectors (when applicable), CONSULTANT shall review the CONTRACTOR's written request for substantial completion and final completion and recommend to COG when the project and the CONTRACTOR's work has achieved substantial and final completion as defined in the CONTRACTOR contract.

CONSULTANT shall, prior to issuing a Certificate of Substantial Completion, compile a list of incomplete work or work that does not conform to the Contract Documents (punch-list items) based on his observations and input from COG's inspectors (when applicable). This list shall be attached to the Certificate of Substantial Completion. The Certificate of Final Completion shall not be issued until the incomplete work has been completed and COG is ready to accept the project. CONSULTANT shall issue the Certificate of Substantial Completion and Certification of Final Completion to the CONTRACTOR.

## 1.11 Project Close-out

1.11.1 Within five (5) days of the receipt of CONTRACTOR's written request for a punch list, CONSULTANT shall make a punch list inspection or inform the CONTRACTOR that the work is not ready for punch list inspection. Upon completion of the deficient work, CONTRACTOR may again request a punch list inspection.

1.11.2 CONSULTANT shall notify the CONTRACTOR in writing of any deficiencies to be remedied prior to final acceptance by written punch-list. Final acceptance shall not be given until the punch-list items are completed in accordance with the Contract Documents. No one is authorized to amend the Contract Documents by use of the punch list, which is solely for the benefit of the CONTRACTOR to enable him to determine what items must be corrected before final acceptance will be recommended by the CONSULTANT.

1.11.3 Final Acceptance: After all work has been completed, as determined by CONSULTANT, CONSULTANT shall recommend in writing to COG that final acceptance of the entire work be made as of the date of CONSULTANT's final inspection.

1.11.4 Simultaneously with the CONTRACTOR's request for final payment, the CONTRACTOR is required to submit the following items to CONSULTANT: (1) red-line construction record drawings; (2) warranties; (3) three sets of documentation covering the operation and maintenance of the mechanical and electrical installation and all other equipment required to be furnished with such manuals; (4) other items required by the Special Conditions. No recommendation shall be made for final acceptance until these items have been received and are complete.

Final Payment: CONSULTANT shall provide to COG a written recommendation regarding final payment to the CONTRACTOR. A final change order, if applicable, shall be prepared by the CONTRACTOR, reviewed and approved by the CONSULTANT, with a recommendation for approval by COG. CONSULTANT's recommendation for final payment shall take into account the GMP, as adjusted by any change orders, amounts already paid, and sums to be retained for incomplete work, liquidated damages, and for any other cause under the Contract Documents. CONSULTANT shall prepare a written statement of final inspection, stating that the work has been given a final inspection, that CONTRACTOR has submitted the required documents, setting forth with detail any deviations in the work as completed, and estimating the cost of correction of such deviations. CONSULTANT's statement shall be transmitted to COG along with CONTRACTOR request for final payment. CONSULTANT shall provide a copy of the statement of final inspection and CONSULTANT's estimate of the sum due to CONTRACTOR.

## 2. TIME MANAGEMENT

- 2.1 Contractor's Construction Schedule: CONSULTANT shall review the CONTRACTOR's resource loaded Construction Schedule and shall verify that the schedule is prepared in accordance with the requirements of the Contract Documents and that it establishes completion dates that comply with the requirements of the Contract Documents. CONSULTANT shall, on a monthly basis and at the time of CONTRACTOR's pay application, review the progress of construction, shall evaluate the percentage complete of each construction activity as indicated in the CONTRACTOR's resource loaded Construction Schedule and shall review such percentages with the CONTRACTOR. This evaluation shall serve as the basis for the progress payments to the CONTRACTOR. CONSULTANT shall advise and make recommendations to COG concerning the alternative courses of action that COG may take in its efforts to achieve contract compliance by the CONTRACTOR.
- 2.2 Recovery Schedules: Where Construction Schedule delays are encountered, CONSULTANT shall request a recovery schedule in writing from the CONTRACTOR and review the recovery schedule for compliance with the Contract Documents. Any delays that may affect the Construction Schedule shall be reported to COG in writing.

### **3. COST MANAGEMENT**

- 3.1 Schedule of Values: CONSULTANT shall review the contract price allocations and verify that such allocations are made in accordance with the requirements of the Contract Documents. Progress payments to the CONTRACTOR shall be based on the CONTRACTOR's percentage of completion of the scheduled activities as set out in the Construction Schedule Reports and the CONTRACTOR compliance in accordance with the Contract Documents.
- 3.2 Change Order Control and Pricing Verification: CONSULTANT shall establish and implement a change order control system. All proposed change orders shall first be described in detail by CONSULTANT, in a request for a proposal to the CONTRACTOR, and shall be accompanied by technical drawings and specifications prepared by the CONSULTANT, when required. In response to the request for a proposal, the CONTRACTOR shall submit to CONSULTANT for evaluation detailed information concerning the cost and time adjustments, if any, as may be necessary to perform the proposed change work order. CONSULTANT shall discuss the proposed change order with the CONTRACTOR and determine the CONTRACTOR basis of the cost and time impacts of performing the work. CONSULTANT shall make recommendations to COG on acceptability of the change in the work, prior to COG's execution of change orders. CONSULTANT shall verify that change order work and adjustments of time and budget, if any, required by approved change orders have been incorporated into the CONTRACTOR's Construction Schedule and the Construction Budget.
- 3.3 Progress Payments: CONSULTANT shall review the payment applications submitted by the CONTRACTOR and make a recommendation to COG whether the amount requested reflects the progress of the CONTRACTOR's work prior to COG issuing payment.

#### **Task E Assumptions:**

- 1 CONTRACTOR and up to 2 GMPs
- 24-month construction schedule from groundbreaking to final completion.

- Witnessing Engine Generator Factory Acceptance Test will not be required. Witnessing of Field Testing or Startup would occur during the inspector's planned time on site.
- 16 hours per week for onsite construction manager/inspector plus 8 hours per month from supervising engineer.
- All construction site meetings will occur during normally scheduled site time for the construction manager/inspector. No additional time has been allocated for the construction manager/inspector. Monthly attendance is assumed for the CONSULTANT's technical lead.
- Up to 85 submittals and resubmittals at 5 hours per submittal
- Up to 15 RFI at 8 hours per RFI
- Up to 4 change orders, at 16 hours per change order
- Up to 10 field directives at 2 hours per field directive
- Construction Quality Assurance, if provided through the CONSULTANT, will be provided under the geotechnical allowance.

**Task E Deliverables:**

- Weekly construction coordination meetings agendas, collateral and minutes
- Construction administration procedures
- Daily construction inspection reports
- Submittal and RFI logs and responses
- Punch lists
- Acceptance recommendations
- Master schedule update
- Schedule updates, project cost, project budget, cash flow, change order and safety reports
- Progress payment recommendations

**F. POST-CONSTRUCTION PHASE**

**1. PROGRAM MANAGEMENT**

- 1.1 Record Documents: CONSULTANT shall coordinate and expedite submittals of information from the CONTRACTOR for preparation of as-built drawings and specifications and shall coordinate and expedite the transmittal of as-built documents to COG.
- 1.2 Organize and Index Operation Maintenance Materials: Prior to the Final Completion of the project, CONSULTANT shall compile and verify completeness of manufacturers' operations and maintenance manuals, warranties and guarantees as received from the CONTRACTOR, and submit such documents to COG.
- 1.3 Systems Training: CONSULTANT shall provide instruction to COG personnel on the project objectives, design intent, and system operational procedures. CONSULTANT Shall provide training on the design and operation of the major systems to the COG prior to substantial completion. CONSULTANT will interface with COG Environmental and Laboratory Groups on sampling protocols, monitoring and measuring well performance (Specific Capacity - gpm/ft).

- 1.3.1 Review the CONTRACTOR developed training outline, schedule and lesson plan format for review and approval by COG. Review with COG and have comments incorporated by CONTRACTOR as appropriate.
- 1.3.2 Review training lesson plans and presentation materials including training guides for the major process systems and submit to COG for review before finalizing by the contractor. The lesson plans shall include the following subjects: purpose and design intent of system; process operations and principles; system controls and control strategies; specific safety procedures and hazards; specific sampling, monitoring, and process calculations; and system orientation and hands-on demonstration.
- 1.3.3 Conduct training on the major process systems. Training may consist of classroom training for each system, followed by field orientation or hands-on instruction.
- 1.4 Warranty Inspection: CONSULTANT shall notify COG Program Manager and Operations Staff and jointly perform a warranty inspection ten (10) months after final acceptance.

## **2. MANAGEMENT INFORMATION SYSTEMS (MIS)**

- 2.1 Close-out Reports: At the conclusion of the project, CONSULTANT shall prepare final Project Cost and close-out reports. All the information contained in the MIS shall be delivered to COG upon completion of the project. Following is a list of items to be included with the close-out package:
  - Copy of Certificate of Substantial Completion with a copy of the punch list itemizing incomplete or deficient items.
  - Copy of Certificate of Final Completion.
  - Copy of final change order, if required, prior to submitting final pay applications.
  - Final pay application with Affidavit for the Settlement of Claims, Record Drawings, Warranties, Operations and Maintenance Manuals and other items as required by the special conditions and/or contract documents.

### **Task F Assumptions:**

- Assumes 120 days for task completion.

### **Task F Deliverables:**

- Record drawings
- System O&M manuals
- Training plans, content reviews and training
- Close-out reports
- Warranty inspection documentation

## **H. OTHER DIRECT COSTS (ODCs)**

### **1. ODCS**

- 1.1 Direct costs including copying, courier, audited project allocated costs, travel, equipment and laboratory services related to well development.

## **G. ALLOWANCES**

### **1. SURVEY**

- 1.1 Allowance for survey subconsultant to provide topographical and boundary surveys for Well AR-15 site, up to 2,000 feet of offsite conveyance corridor, and easement descriptions. The survey for the Arrowhead Hospital Well was done under a previous project phase.

### **2. GEOTECHNICAL**

- 2.1 Allowance for geotechnical exploration for the two wells.

### **3. SRP WELL EVALUATION**

- 3.1 If requested, CONSULTANT will review the existing status of each SRP well and any available water quality to see which SRP wells meet the goals of the COG. For those wells that meet COG's criteria, CONSULTANT would perform hydraulic analyses to determine how the wells would be connected to the potable water system and the collection system if necessary for pump to waste. Also, for each well meeting COG's criteria, CONSULTANT would develop planning level cost estimates. It is assumed that COG will coordinate with SRP to obtain available data, including recent pumping rates and water level, water quality sampling, and existing well as-built information. Should available water quality information be insufficient to provide recommendations, CONSULTANT may be required to coordinate with SRP and obtain water quality samples. COG will arrange and pay for any laboratory services separately.

### **4. INTERMUNICIPAL CONNECTIONS SUPPORT SERVICES**

- 4.1 If requested, CONSULTANT will provide technical support in the form of reviews of proposed agreements, hydraulic evaluations, or engineering services related to implementation.

### **5. CONTINUING PROGRAMATIC SERVICES**

- 5.1 If requested, this allowance would cover the CONSULTANT providing continued programmatic oversight of the Groundwater Well Program beyond the implementation of the Arrowhead Hospital Well and AR-15. Continuing programmatic services may entail extended administration of the program including further program administration, hydrogeological studies, detailed engineering evaluations, detailed design or design oversight, A/E or CONTRACTOR procurement assistance, and/or construction oversight.

**EXHIBIT C**  
**Professional Services Agreement**

**SCHEDULE**

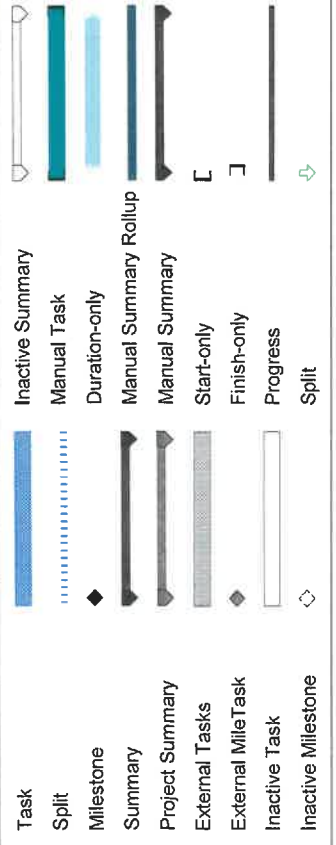
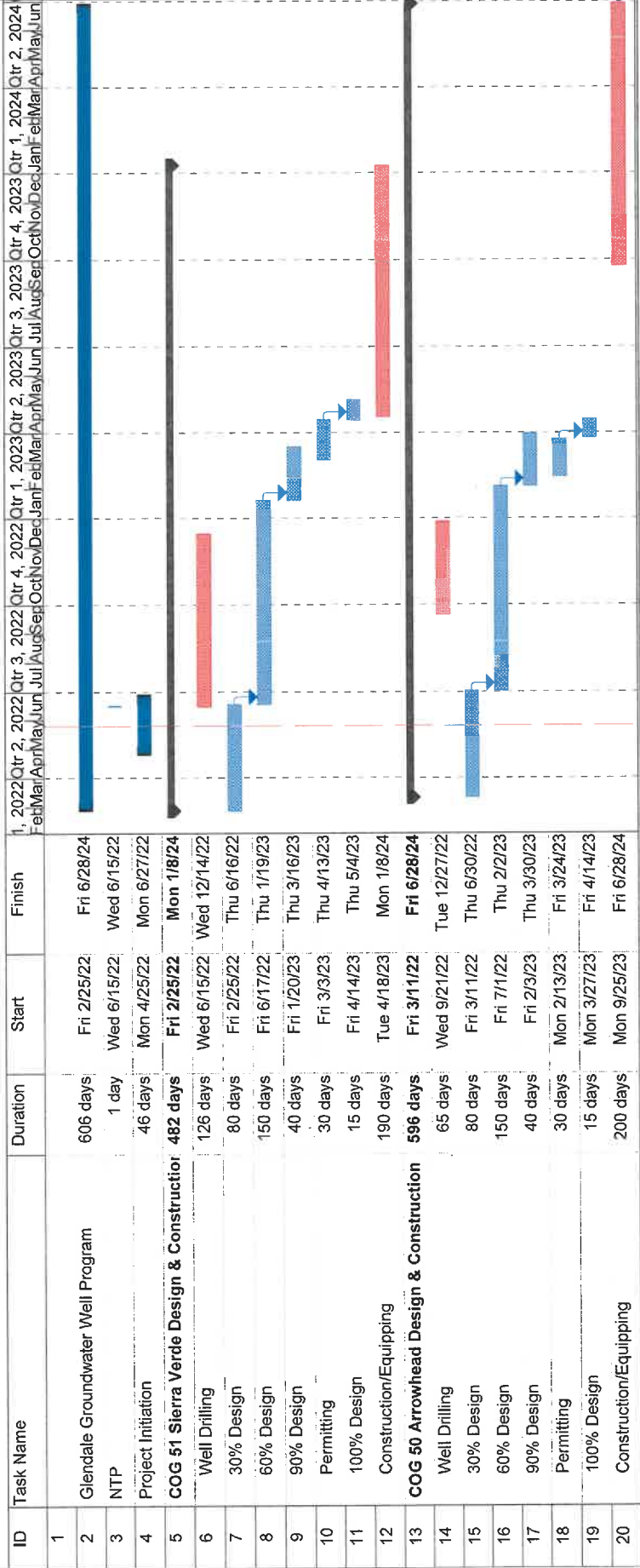
The Project Implementation Schedule is preliminary. A baseline Schedule will be developed at the onset of the Project and periodically updated as part of the base scope of services.



City of Glendale

Groundwater Well Program Management

Program Schedule



City of Glendale  
Groundwater Well Program Management  
Date: Thu 5/26/22

**EXHIBIT D**  
**Professional Services Agreement**

**COMPENSATION**

**METHOD AND AMOUNT OF COMPENSATION**

Time & Materials not to exceed

**NOT-TO-EXCEED AMOUNT**

The total amount of compensation paid to Consultant for full completion of all work required by the Project during the entire term of the Project must not exceed \$1,888,433.

**DETAILED PROJECT COMPENSATION**

See attached.

**EXHIBIT D**

<b>TASK NO.</b>	<b>DESCRIPTION</b>	<b>COST</b>
TASK A	GENERAL PROGRAM MANAGEMENT SERVICES	\$134,802.00
TASK B	PRE-DESIGN PHASE	\$255,891.00
TASK C	DESIGN PHASE	\$834,820.00
TASK D	PRE-CONSTRUCTION ACTIVITIES	\$9,268.00
TASK E	CONSTRUCTION PHASE	\$395,883.00
TASK F	POST-CONSTRUCTION PHASE	\$41,769.00
TASK G	ALLOWANCES	\$149,000.00
TASK H	OTHER DIRECT COSTS	\$67,000.00
	<b>TOTAL NOT TO EXCEED</b>	<b>\$1,888,433.00</b>